

# Dividers

## Key Issues:

- Variable product size
- Weight consistency
- Safety
- Gentle treatment of dough
- Recipe control
- Changeover time
- Simple maintenance
- Track & Trace

## Equipment Used:

- Variable speed drives
- Servo systems
- HMI
- PLC/Motion controller



*Variable speed and servo control technologies provide accurate scaling of the dough*

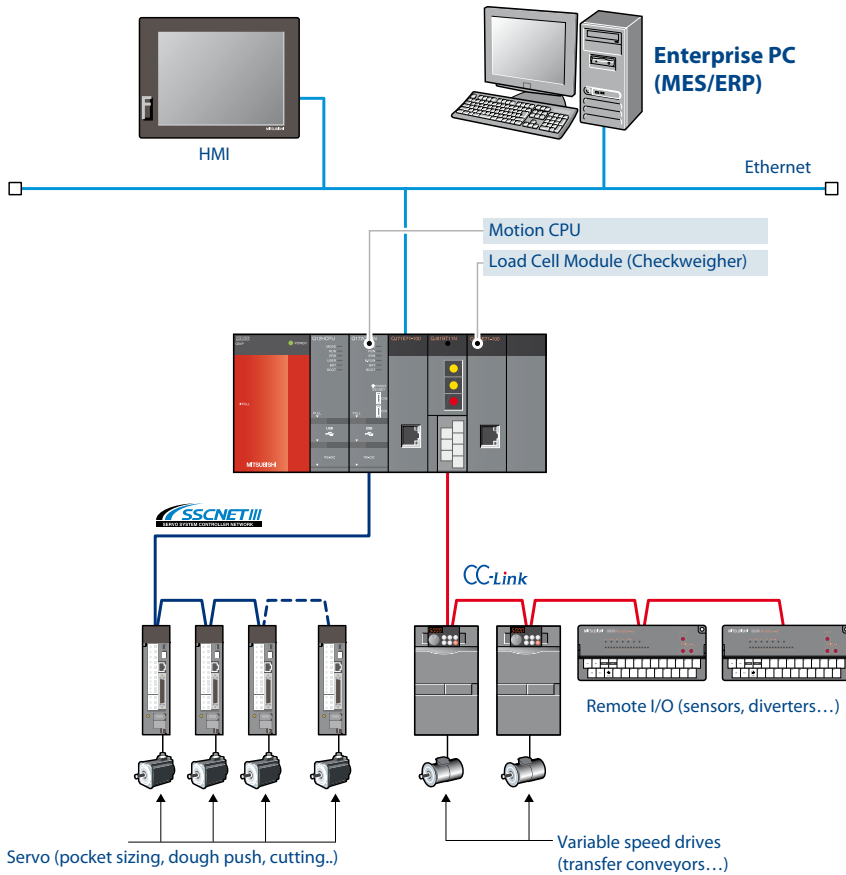
## Total flexibility

Careful handling of the dough at the dividing stage is imperative so that there is no damage to the dough structure. Maintaining quality, whilst improving performance are key objectives at this stage of the process.

Variable speed drives and servo control technologies provide accurate scaling of the dough and the flexibility to adjust output weights during production. Accurate servo positioning provides easy repeatable product changeover capability, reducing changeover downtime and improving performance. Controlling the force exerted on the dough is extremely sensitive using servo systems and ensures the divider maintains the dough quality. This can also help with savings on ingredients such as yeast and flour improvers, thus reducing manufacturing costs and improving yield.

## Track and Trace

Information such as dough weight per piece, variance trends from target weight, with weight totals are collected and passed to a secure database for management reporting and Overall Equipment Effectiveness (OEE). The information can then be used as part of a lean manufacturing or six sigma continual process improvement philosophy. The Key Performance Indicators (KPIs) of dough weight and variance can be monitored closely and the plant automatically adjusted to reduce waste.



Typical control structure using servos, PLCs and drives in divider application

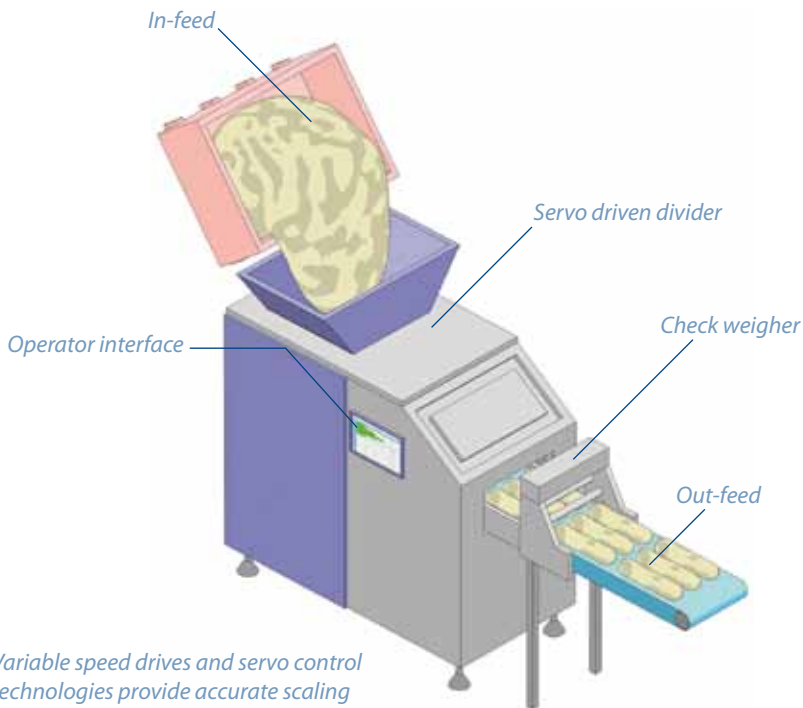


Retain dough quality and increase yield

## Open networking

Interfacing to check weighing systems can be done easily with the open networking connectivity of Mitsubishi controllers.

Mitsubishi has developed its core technology so that each device can communicate with other devices on the network including other manufacturers products. This overcomes the issue of integrating different manufacturers equipment between each part of the process.



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### Mitsubishi Automation System Solutions:

- Retaining dough quality
- High accuracy control
- Fast changeover enables good product flexibility
- Product weight variance detection and control
- Excellent repeatability
- Batch control/management
- OEE and Lean manufacturing
- Increased yield